

is no basis for the Examiner's statement that Sprenger teaches a control circuit coupled to such servo motors and responsive to an electrical control signal from an angular rate sensing means for de-energizing such servo motors.

In paragraph no. 3 of the Official Action, the Examiner again asserts that Sprenger discloses the use of servo motors citing paragraph 2 of the abstract. Paragraph 2 of the abstract is merely saying that XY positioner stages had earlier been "driven by DC servo motors with ball screws or parallel structures". Clearly, however, the XY positioner discussed in the "System Overview" makes no use of such DC servo motors. As such, it is wrong to say that Sprenger teaches using an angular rate sensor on the base plate of a Delta robot to produce an electrical control signal for de-energizing the robot's servo motors when the rate of change of angular displacement due to uncoupling of an arm of the Delta robot produces inclination or rotation of a Delta robot base plate.

The Examiner is also respectfully requested to reconsider his position that the Foxlin '077 patent is "in the same field of (applicant's) invention". Foxlin does not pertain to the field of industrial robots, but instead to inertial navigation systems used by NASA for tracking the angular orientation of a subject's head. The fact that the Foxlin head tracker uses as a component an "angular rate sensor" does not make that reference relevant to the particular problem with which applicant was involved, i.e., protection of an industrial robot in the event of an uncoupling of an arm from a base plate carried by such arm. Engineers designing industrial robots should not be charged with knowledge of the methods and apparatus used in inertial angular orientation tracking apparatus. It is believed that the Foxlin '077 reference may have been selected merely because it happens to have therein the search term "angular rate sensor" used in application claim 4, but that is the use of impermissible hindsight to the extreme.

For the reasons advanced, then, it would not have been obvious to persons of ordinary skill in the design of industrial robots, and especially Delta robots, to arrive at applicant's use of an angular rate sensor mounted to the base plate of a Delta robot to detect unwanted uncoupling of one of the arms of the Delta robot from its base plate and producing an electrical control signal for shutting off the servo motors to prevent costly

damage to the Delta robot. This is a meritorious improvement that should be worthy of the grant of a patent thereon.

Respectfully submitted,

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A handwritten signature in black ink, appearing to read "T. J. Nikolai", written over the printed name.

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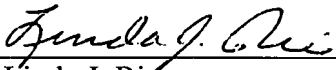
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CERTIFICATE OF MAILING

I hereby certify that the foregoing Request for Reconsideration in response to the Final Official Action of September 10, 2007, in application Serial No. 10/776,498, filed on February 10, 2004, of Gabriel F. Osten, and entitled "Robot End Effector Detachment Sensor" is being deposited with the U.S. Postal Service as First Class mail in an envelope addressed to: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, postage prepaid, on October 16, 2007.

Date of Signature: October 16, 2007.



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